PATENT   Atty Docket No.: 200403365-1
                                                        App. Ser. No.: 10/830,217

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Currently Amended) A method of selecting input/output (I/O) devices to control power consumption of a computer system, the method comprising:

    determining a power consumption metric for each of a plurality of I/O devices connected to the computer system while the plurality of I/O devices are connected to the computer system, wherein the plurality of I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system to the user;

    ~~selecting at least one of the plurality of I/O devices based on the determined power consumption metric; and~~

    ~~reducing power consumption of the at least one selected I/O device;~~

    identifying top power consuming I/O devices of the plurality of I/O devices based on the power consumption metric; and

    identifying low-power I/O device alternatives to using the top power consuming I/O devices.

2. (Canceled).

3. (Currently Amended) The method of claim [[2]] 1, wherein identifying top power consuming I/O devices of the plurality of I/O devices comprises:

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estimating future power consumption for each of the plurality of I/O devices for a period of time in the future; and

selecting a group of the plurality of I/O devices having the highest estimated future power consumptions.

4. (Canceled).

5. (Currently Amended) The method of claim [[4]] 1, wherein the low-power alternatives comprise at least one of placing a top power consuming I/O device in a low-power mode and disabling a top power consuming I/O device if an I/O device providing substantially the same functionality and consuming less power is available for use.

6. (Currently Amended) The method of claim [[4]] 1, wherein identifying low-power I/O device alternatives comprises:

using a usage model to determine whether any low-power I/O device alternatives to using the top power consuming I/O devices are available, the usage model including a historical analysis of usage for the plurality of I/O devices.

7. (Original) The method of claim 6, wherein the usage model identifies user acceptance of the low-power I/O device alternatives.

8. (Currently Amended) The method of claim [[4]] 1, further comprising:

determining power savings for each of the low-power I/O device alternatives.

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9. (Original) The method of claim 8, wherein determining power savings comprises:

estimating a first future power consumption for a top power consuming I/O device

operating in a normal mode;

estimating a second future power consumption for a respective low-power I/O device

alternative; and

determining a difference between the first and second future power consumptions.

10. (Original) The method of claim 8, wherein selecting at least one of the plurality of I/O

devices based on the determined power consumption metric comprises:

selecting at least one of the top power consuming devices based on user acceptance

and power savings of a low-power I/O device alternative to the at least one top power

consuming I/O device.

11. (Original) The method of claim 10, wherein selecting at least one of the top power

consuming devices comprises:

selecting a plurality of the low-power I/O device alternatives associated with the top

power consuming I/O devices;

ranking the plurality of low-power I/O device alternatives based user acceptance and

power savings for each of the plurality of low-power I/O device alternatives; and

selecting at least one of the plurality of low-power I/O device alternatives based on

the ranking.

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12. (Currently Amended) The method of claim 1, ~~wherein selecting at least one of the plurality of I/O devices comprises~~ further comprising:

selecting at least one of the plurality of I/O devices based on the determined power consumption metric and based on a usage metric for each of the plurality of I/O devices.

13. (Original) The method of claim 12, wherein the power consumption metric comprises at least one of estimated power consumption of the plurality of I/O devices, estimated future power consumption of the plurality of I/O devices, an aggregate of the power consumption of each of the I/O devices, power consumption of the computer system, estimated future power consumption of the computer system, and a power savings for each of the I/O devices if a respective I/O device were placed in a low-power mode.

14. (Original) The method of claim 12, wherein the usage metric comprises a metric associated with user acceptance of placing an I/O device of the plurality of I/O devices in a low-power mode.

15. (Currently Amended) A method of selecting input/output (I/O) devices to control power consumption of a computer system, the method comprising:

determining a power consumption metric for each of a plurality of I/O devices connected to the computer system while the plurality of I/O devices are connected to the computer system, wherein the plurality of I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system to the user.

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~~The method of claim 1,~~ wherein the power metric comprises an estimated future power consumption ~~and the step of selecting comprises;~~ and determining a power consumption metric further comprises

determining recent use of each of the plurality of I/O devices; and

estimating future power consumption based on the recent use for each of the plurality of I/O devices; and

selecting at least one of the plurality of I/O devices based on the estimated future power consumption; and

reducing power consumption of the at least one selected I/O device.

16. (Currently Amended) ~~The method of claim 1, further comprising;~~ A method of selecting input/output (I/O) devices to control power consumption of a computer system, the method comprising:

determining a power consumption metric for each of a plurality of I/O devices connected to the computer system while the plurality of I/O devices are connected to the computer system, wherein the plurality of I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system to the user;

selecting at least one of the plurality of I/O devices based on the determined power consumption metric;

identifying a setting associated with the at least one of the plurality of devices, wherein the setting specifies a constraint on reducing power consumption for the at least one of the plurality of I/O devices; and

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~~the step of reducing power consumption comprises~~ reducing power consumption of the at least one of the plurality of I/O devices if the constraint specified in the setting can be maintained.

17. (Original) The method of claim 16, wherein the setting comprises a setting specified by a user.

18. (Currently Amended) ~~The method of claim 1, further comprising:~~ A method of selecting input/output (I/O) devices to control power consumption of a computer system, the method comprising:

determining a power consumption metric for each of a plurality of I/O devices connected to the computer system while the plurality of I/O devices are connected to the computer system, wherein the plurality of I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system to the user, wherein the power consumption metric comprises usage of each of the plurality of I/O devices and is determined by profiling usage of each of the plurality of I/O devices;

generating a usage model from the profiling; ~~and~~

~~the step of selecting comprises~~ selecting at least one of the plurality of I/O devices based on the usage model; and

reducing power consumption of the at least one selected I/O device.

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19. (Original) The method of claim 18, wherein profiling usage comprises:

analyzing recent usage behavior of at least one of the plurality of I/O devices for a given user.

20. (Original) The method of claim 18, wherein profiling usage comprises:

analyzing past usage behavior of at least one of the plurality of devices for a plurality of users.

21. (Currently Amended) The method of claim 1, further comprising: A method of selecting input/output (I/O) devices to control power consumption of a computer system, the method comprising:

determining a power consumption metric for each of a plurality of I/O devices connected to the computer system while the plurality of I/O devices are connected to the computer system, wherein the plurality of I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system to the user, wherein the power consumption metric comprises power consumption of each of the plurality of I/O devices and is determined by profiling power consumption of each of the I/O devices;

generating a power model from the profiling; and

the step of selecting comprises selecting at least one of the plurality of I/O devices based on the power model; and

reducing power consumption of the at least one selected I/O device.

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22. (Original) The method of claim 1, wherein the power consumption metric comprises at least one of estimated power consumption of the plurality of I/O devices, estimated future power consumption of the plurality of I/O devices, an aggregate of the power consumption of each of the I/O devices, power consumption of the computer system, estimated future power consumption of the computer system, and a power savings for each of the I/O devices if a respective I/O device were placed in a low-power mode.

23. (Previously Presented) A method of controlling power consumption of I/O devices for a computer system, the method comprising:

      profiling usage patterns of the I/O devices to establish a usage model, wherein the I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system to the user;

      identifying low-power alternatives to using at least one of the I/O devices using the usage model;

      profiling power consumption of the I/O devices to establish a power model;

      selecting at least one of the low-power alternatives to reduce power consumption of the computer system based on the power model.

24. (Original) The method of claim 23, wherein the low-power alternatives comprise at least one of placing an I/O device in a low-power mode and disabling an I/O device if another I/O device providing substantially the same functionality and consuming less power can be used.

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25. (Original) The method of claim 23, further comprising:

determining whether a power consumption of the computer system or an estimated future power consumption of the computer system exceeds a threshold; and

performing the step of identifying low-power alternatives and the step of selecting at least one of the low-power alternatives in response to the threshold being exceeded.

26. (Previously Presented) An apparatus comprising:

means for identifying a plurality of low-power alternative means to using an I/O device connected to a computer system using a usage model;

means for selecting at least one of the low-power alternatives means to reduce power consumption of the computer system using a power model;

means for determining whether a power consumption of the computer system or an estimated future power consumption of the computer system exceeds a threshold; and

means for activating the means for identifying a plurality of low-power alternative means and the means for selecting at least one of the low-power alternatives means in response to the threshold being exceeded.

27. (Original) The apparatus of claim 26, wherein the low-power alternative means comprises means for providing substantially the same functionality of the I/O device at reduced power consumption.

28. (Canceled)

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29. (Currently Amended) Computer software embedded on a computer readable storage medium, the computer software comprising instructions of:

determining a power consumption metric for each of a plurality of I/O devices connected to a computer system, while the plurality of I/O devices are connected to the computer system, wherein the plurality of I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system to the user;

~~selecting at least one of the plurality of I/O devices based on the determined power consumption metric; and~~

~~reducing power consumption of the at least one selected I/O device~~

identifying top power consuming I/O devices of the plurality of I/O devices based on the power consumption metric; and

identifying low-power I/O device alternatives to using the top power consuming I/O devices.

30. (Original) The computer software of claim 29, wherein the instruction of selecting at least one of the plurality of I/O devices comprises instructions of:

identifying top power consuming I/O devices of the plurality of I/O devices based on the power consumption metric; and

selecting at least one of the top power consuming I/O devices to reduce power consumption.

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31. (Original) The computer software of claim 30, further comprising an instruction of:

determining whether any low-power I/O device alternatives to using the top power consuming I/O devices are available.

32. (Original) The computer software of claim 31, further comprising an instruction of:

determining power savings for each of the low-power I/O device alternatives.

33. (Original) The computer software of claim 32, wherein the instruction of selecting at least one of the plurality of I/O devices comprises an instruction of:

selecting at least one of the top power consuming devices based on user acceptance and power savings of a low-power I/O device alternative to the at least one top power consuming I/O device.

34. (Currently Amended) A computer system comprising:

a processor; and

a battery, wherein the processor is operable to determine a power consumption metric for each of a plurality of I/O devices connected to the computer system, select at least one of the plurality of I/O devices based on the determined power consumption metric and-an estimation-of-future-power-consumption-based-on-the-power-consumption-metric-for-each-of the-plurality-of-I/O-devices-for-a-period-of-time-in-the-future, and control the at least one selected I/O device to reduce power consumption in response to remaining battery life falling below a threshold,

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wherein usage is profiled for each of the plurality of I/O devices and a usage model is generated from the profiling and the processor selects the at least one of the plurality of I/O devices based on the usage model.

35. (Previously Presented) The method of claim 1, wherein each of the I/O devices comprise a piece of hardware, operable to be used in combination with software, providing data to the computer system and/or for receiving data from the computer system.

36. (Previously Presented) The method of claim 35, wherein the I/O devices comprise at least one of a keyboard, a joystick, a mouse, a touch pad and a display.